ABSTRACT

With the advances in health care technology, many surgical procedures are performed as day surgery cases. The provision of day surgery is considered to be a cost effective method of utilising resources, but it does challenge nurses to provide optimal patient care during the patient’s short stay in hospital. Patient satisfaction is considered to be an important indicator of quality nursing care. This paper reports on an investigation aimed at assessing patient satisfaction with day surgery in an Australian metropolitan public hospital. One hundred and seven patients completed a recently developed survey assessing patient satisfaction with day surgery. The response rate was 41%. Waiting times, communication, pain management and discharge planning were major areas of patient dissatisfaction. Directions for improvement in day surgery services are discussed.

INTRODUCTION

The rapid advances in health care technology worldwide have made accessing elective surgery on the day of surgery admission increasingly common. The Victorian Government in Australia, Department of Human Services Patient Management Taskforce (2000) has found no evidence that admitting people on the day of surgery delays discharge or increases mortality or morbidity. Day surgery is considered by many to be a cost-effective method of utilising resources as it contributes to reduced waiting lists for elective surgery, as well as reduced lengths of stay for hospital in-patients. With the increase in day surgery cases, nurses are being challenged to provide quality patient care during short patient stays (Cleary et al 1999). The aim of this project was to assess patient satisfaction with day surgery at a large metropolitan public hospital in Melbourne, Victoria, Australia, (Hospital A), and to simultaneously re-test the reliability of a recently developed survey assessing patient satisfaction with day surgery.

Because patients prepare for day surgery procedures at home and return to their homes on the same day the procedure is performed, the potential exists for problems associated with day surgery procedures to be less visible than they would be for in-patients. Additionally, the rapid throughput of patients in these types of services makes auditing of patient satisfaction of the service delivery quite imposing both to patients and to health professionals. However, patient satisfaction is an important indicator of quality of nursing care delivery (Attree 2001). It is therefore important the tools used for measuring patient satisfaction are examined (Attree 2001; Merkouris et al 1999; Walker et al 1998; Lin 1996).

The reliability and validity of patient satisfaction tools utilised by Australian hospitals have never been formally...
established (Ching and Ung 1997). The proliferation of untested tools could provide a misguided assessment of patient satisfaction. Additionally, major funding cuts to health care in Australia and the introduction of case-mix funding in the 1990s have had a detrimental effect on patient care. Toy and Davies (1998) have reported that patients are spending more time on trolleys, there is less time for nursing staff to talk to patients, and there has been a reduction in patient privacy, all of which affect patient satisfaction.

BACKGROUND

The aim of this study was to assess patient satisfaction with day surgery using survey methodology in a large public metropolitan hospital (Hospital A) in Victoria. In most western countries, day surgery as a mode of health care delivery is considered to be an efficient approach to addressing increasing surgical caseloads and cost containment in acute care services (Dougherty 1996; Hutson 1996). Despite an increase in day surgery in Australia (Cleary et al 1999; Dodson and Ellis 1996), the majority of research relating to day surgery has been conducted in other countries, typically by telephone interview.

Some findings relating to patients’ satisfaction with day surgery highlight the minimal disruption day surgery causes to patients’ personal lives (Law 1997; Otte 1996; Davies and Tyers 1992). Reasons for patients’ discontent with day surgery include long periods of waiting for surgery on the day of admittance (Bain et al 1999; Law 1997); unsatisfactory discharge planning (Dougherty 1996; Noon and Davero 1987); and, inadequate communication, or difficulty in remembering verbal advice (Brown and Duxbury 1997; Lancaster 1997; Sigurardottir 1996). Negative experiences after discharge, such as inadequate pain control, have also been highlighted in literature (Coll et al 1999; Stoker et al 1999; Waterman et al 1999; Mackintosh and Bowles 1998; Salvage 1998; Oberle, Lewin and Razis 1995; Allen and Lynkowski 1994; Hawkshaw 1994; Firth 1991; Fraser et al 1989).

The definition of patient satisfaction is diverse (Bond and Thomas 1992; Lin 1996), although it has been argued that patient satisfaction is an indicator that informs health professionals as to whether patients’ needs have been met (Cleary et al 1999; Merkouris et al 1999; Edmondson 1995; Long and Greenreich 1994). Satisfaction with care relates to, and is dependent upon, patient expectations (von Essen and Sjoden 1991), which may be influenced by age, gender, culture, previous experience, health status, communicative ability of health professionals and patients’ ability to understand information given to them (Bond and Thomas 1992; Otte 1996). However, it may be argued that meeting patient expectations does not equate to quality of care, although it may correlate with patient satisfaction.

Description of ‘Hospital A’ day surgery context

At the time the study commenced in April 1999, day procedures were temporarily housed in a joint medical/surgical ward where patients were admitted, assessed, and taken directly into the operating theatre for the procedure. Recovery and discharge took place in the same area. The design of this unit was less than ideal. There were limited changing facilities or interview rooms and patient privacy was difficult to maintain. In July 1999, day procedures moved to a refurbished, although not purpose-built, day surgery unit. The environment adequately suited day procedure needs, with large rooms for waiting and recovery, and four private rooms for admitting and assessing patients. The Day Procedure Unit (DPU) currently admits up to 42 patients per day, including multi-day stay patients who are admitted on their day of surgery, day surgery patients and patients for endoscopy.

METHOD

A Patient Satisfaction Survey designed by Ching and Ung (1997) was utilised for this study. The survey was informed by the work of Courts (1995) and included specific items relating to the patient’s pain management, education and decision-making. There were six sections that addressed demographic data, satisfaction with admission, the operation (including pain management), the environment, discharge and general rating of satisfaction. Each section was explored by a series of questions broken into ‘items’ or sub-questions that addressed a distinct aspect of services. For example, the section titled ‘satisfaction with admission’ explored patient satisfaction with information received before and after surgery, reception, nursing and technical staff, and waiting times.

Questions were answered using a Likert-type 5 point scale ranging from poor, good, very good and excellent to not applicable, yes/no responses, and the opportunity to make additional comments to elicit quantitative and qualitative data from patients. Qualitative information was extracted and content analysis performed according to Ely et al (1996). The survey tool was found to have ‘Cronbach’s a’ co-efficients of 0.85 to 0.96 (mean=0.92, SD=0.1511) when it was first piloted in another institution, suggesting an acceptable degree of internal consistency. Factor analysis revealed only one construct per question, while significant Pearson correlation co-efficients were observed in almost all questions.

Two hundred and sixty-seven patients attending day surgery who met the selection criteria out of a total pool of 2512 agreed to be mailed a package that was sent to them approximately one week after discharge for consideration. The selection criteria stipulated that the participant had to be over 18 years of age; be able to read and understand English; and have undergone day surgery and been discharged home on the same day. The package
included a plain language statement of the survey, a consent form with separate envelope, a questionnaire and a self-addressed, stamped envelope for return to the researcher.

A total of 107 patients responded, representing a response rate of 41%. Given that expected return rates for this type of survey can be as low as 20-30% (Dillman 2000; Salant and Dillman 1994), and that ethical clearance for this study did not permit reminder letters to be sent out, the response rate was high, and reflected patient interest in contributing to this area of research. However, selection bias is recognised. The non-respondents may have been a group who were satisfied with the services, but did not think the survey was an important feedback mechanism for quality assurance. Of course, it is equally plausible the non-respondents were dissatisfied with the services and dismissive of the survey as a feedback mechanism. Additionally, it is relevant to note half way through data collection, day surgery patients were relocated to a refurbished day procedure unit, effectively dividing the data into two parts. Forty responses were returned from participants attending the original day surgery unit, and 67 participants commented on their experience of the refurbished day surgery unit.

**QUANTITATIVE FINDINGS**

The age, gender break-up and occupation of patients who responded to the survey are summarised in Table 1.

To determine whether overall ratings of satisfaction were affected by the age, gender and occupational status of patients, a 2x2x6 analysis of variance was performed. There were no significant differences between overall ratings of satisfaction for occupational status (F (1, 87)=0.00, p>0.05), gender (F (1, 87)=0.78, p>0.05) and age (F (5, 87)=0.70, p>0.05). See Table 2 for means and standard deviations.

Interactions between age and gender (F (5, 87)=0.40, p>0.05), gender and occupational status (F (1, 87)=0.06, p>0.05), age and occupational status (F (4, 87)=0.29, p>0.05), and age, occupational status and gender (F (2, 87)= 0.08, p>0.05) were also not significant. These results indicate that there were no differences between age, gender and occupational status on overall ratings of satisfaction. Therefore, these demographic variables did not seem to contribute to overall ratings of satisfaction.

Data collection included the period in which the DPU moved premises. As a result, a series of independent t-tests were calculated to determine whether there were any significant differences between patient satisfaction levels in the old and new environments. It was found there were no overall significant differences (p>0.05) between patient satisfaction levels prior to and after the change of environment in this data. Examination of individual survey items indicated that at no time, either before or after the change of environment, did patients’ average ratings of satisfaction with services provided by Hospital A fall below a rating of ‘good’. Average ratings of individual survey items indicated that patients considered...
the courtesy and respect shown by nursing staff to be even better after the change of environment. Patients also considered doctors’ knowledge and skills to be excellent.

Overall, the admission section demonstrated a rating of ‘good’ on the Likert scale, with a mean of 3.45 and a standard deviation of 0.73; the operation section had a rating of ‘very good’, with a mean of 3.9 and a standard deviation of 0.88; the environment section bordered between ‘good’ and ‘very good’, with a mean of 3.65 and a standard deviation of 0.77; and, the discharge section had a rating of almost ‘very good’, with a mean of 3.89 and a standard deviation of 0.90.

Factor analysis and reliability of the instrument

A principal components factor analysis with oblique rotation was performed to determine the factor structure of the Patient Satisfaction Survey responses for Hospital A. Eigenvalues pattern and structure matrices indicated that a one factor solution was the best fit for the data. The highest loading question was overall satisfaction with admission, operation, environment and discharge, which coupled with the eigenvalues suggested that the Patient Satisfaction Survey taps into a general satisfaction construct.

As shown in Table 3, the ‘Cronbach’s a’ co-efficients were quite high, except for questions 6, 8 and 13. These questions have ‘Cronbach’s a’ co-efficients lower than 0.7, which is the lowest coefficient that has an acceptable degree of internal consistency (Nunnally 1978). The differences in these items could be attributed to the complex social differences in the population group that may have influenced perceptions about quality of care (Walker et al 1998).

Many of the questions listed in Table 3 have a coefficient greater than 0.9, which could be regarded as too high by some researchers, and might even be an indication that items within each question provided similar information to the study. However, the sample size was relatively large. It is well known that an increase in person-to-person variation will result in higher a values (Nunnally 1978). Moreover, a closer inspection of the question items reveals that they are not quite the same. Each of the question items address a distinct aspect of the services. Hence, it is reasonable to conclude that the questionnaire has an acceptable degree of internal consistency.

QUALITATIVE DATA ANALYSIS

Despite severe funding cuts to public health care resulting in staff shortages and limited resources, at no time did our sample of patients’ ratings of satisfaction fall below ‘good’. Consistency of services was also noted in the qualitative data: ‘This was my 5th procedure at [Hospital A] - as usual, everything was excellent.’ However, content analysis (Ely et al 1996) of the data revealed some significant areas of patient discontent before and after the move into the new unit that are discussed under the following four major headings.

Admission

The majority of patient dissatisfaction regarding admission related to long waiting times. Fourteen percent of respondents had experienced waiting times of between two and nine hours. For example, one respondent noted: ‘Had to arrive at 6.30am, but didn’t have operation until after 2pm. Long waiting periods.’ This comment exemplifies a persistent and major concern raised by patients attending day surgery centres. The location in
which the patient had to wait was also important. Waiting for long periods in an uncomfortable chair or on a trolley in a particularly vulnerable period was seen to be problematic: ‘Left on trolley outside theatre for at least three hours waiting for my operation. The nurses were lovely and caring but the wait was long and tedious’.

The operation

Unsatisfactory communication with medical staff regarding the operation was an area of dissatisfaction. Those patients who managed to see their surgeon pre-operatively thought their discussions may have been overheard by others, which threatened their privacy. A few did not know who their surgeon was, or were offered no explanation of their surgery. However, comments relating to the operation period itself revealed some respondents received excellent explanations from their surgeon and anaesthetist. Some comments, though, were made about medical staff demonstrating a lack of compassion: ‘The only thing the surgeon said to me was: “Which leg are we operating on?”’. I told him. And then he said: “We won’t be long now!” No explanation of the operation, no time for questions. Very cold and mechanical!’

Anaesthetic staff were also noted to lack sensitivity at times: ‘The anaesthetist was very blunt and to the point. Extremely rough when putting the drip in (it took two goes). I explained that pethidine made me sick and they made me feel ridiculous.’

Specific complaints about nursing staff related to inaccurate or confusing information given to patients, and failure to respond to patient needs post-operatively. For example: ‘Nurses - short staffed - patients not given considerable time and attention as required - I felt very sorry for older patients who could not help themselves nor reach the buzzer - sometimes I had to buzz them as they were yelling and no-one cared to hear or attend until I buzzed. It was too late sometimes. Very poor attendance.’

Postoperatively, a significant number of respondents stated their pain was poorly managed in that the attending nurses withheld analgesia or failed to provide stronger analgesia at the patients’ request: ‘Even though I protested that panadeine would not touch the sides, this was all I was given.

Environment

Qualitative data revealed a different story to the statistical analysis, in that some patients thought the waiting room was dull and too small for the number of patients. Comfortable seats and up-to-date reading materials were seen by some patients to be important factors in reducing the anxiety of waiting: ‘We spend a long time in the waiting room. To me it was very sterile, with seating that was quite uncomfortable, after three, four, five hours. Liven up the area up a bit. Plants, posters, more interesting reading material, better colours etc.’

Another concern raised was the lack of privacy. Temperature and noise levels were additional concerns: ‘When you have been raped of all your clothes you feel not very comfortable sitting in a public visiting room with the thin gown and slippers on. I felt very bad and at one stage even cried.’ This demonstrates just how helpless some patients feel having day surgery, and the importance of being aware of individual patients’ needs, such as privacy and warmth, when providing patient care.

Discharge

Patient comments that were consistent with the literature review included that there was inadequate discharge planning. Specifically, respondents felt there was inadequate information given on the details of the operation, follow-up appointments, and potential problems and their management, including pain and wound management. When written information was provided, some patients thought it difficult to understand, incomplete or included medical jargon that needed explanation: ‘[I] was given no contact details if a problem arose, and very, very poor instructions about managing at home.’

Respondents also requested education on pain management, such as what to expect, what complications might occur, types of analgesia and their actions and strength: ‘I would have liked post operative instructions [about] what pain killer etc [strength] I could take and what other care and medication to take. After a couple of days, I went to the chemist to ask for help.’

Other patients’ analgesic requirements were neglected because they had been given regional analgesia, but when this wore off, they were left in pain: ‘Because foot was still numb, I was not given any pain killers to go home with after the numbness had worn off.’

DISCUSSION

It was of interest that the statistical data gleaned from utilising a survey tool with an acceptable degree of internal consistency gave a very positive view of day surgery, and that patient demographics and the move mid-data collection to the refurbished day surgery unit did not affect the overall ratings of patient satisfaction. The qualitative data, however, indicated a negative view of day surgery. This seemingly paradoxical situation is hard to understand and one can only speculate as to why this was so. Perhaps some explanation may be that the scale utilised a rating where ‘good’ equated with ‘satisfactory’, and that qualitative responses tend to draw more information from the participant. Whatever the case, because the qualitative data revealed a different picture, the development of survey tools that include personal comments will enable researchers to obtain a broader picture of patient satisfaction.

The qualitative findings were consistent with those in the literature review, suggesting that despite research, little has changed in relation to day surgery discontent. The persistence of unacceptable waiting times (Bain et al
1999; Law 1998; Otte 1996), poor communication (Brown and Duxbury 1997; Lancaster; 1997; Sigurdardottir 1996) and pain management (Coll et al 1999; Waterman et al 1999; Mackintosh and Bowles, 1998; Salvage 1998; Lewin and Razis 1995; Hawkshaw 1994; Firth 1991; Fraser et al 1989) was particularly problematic. Most of our respondents said the wait, whether in day surgery or in the preoperative holding room of the operating suite, was unpleasant and enhanced feelings of anxiety and discomfort, such as pain, hunger, thirst, loneliness and a lack of privacy.

Long waiting times are often unavoidable due to emergencies, unforeseen delays and re-scheduling of operating lists. Nevertheless, proactive management can put strategies in place to reduce waiting times. Often patients attending day surgery are admitted either all at once in the morning, or, at best, in two streams - around 7 am and 12 midday - to meet estimated operating times. Staggering patient admissions or simply booking operation times would ensure a more prompt service.

Prior to surgery, patients need to be clearly forewarned there may be delays in their planned surgery times. Some patients in this study were under the illusion they would be operated on soon after admission. Keeping patients informed of delays as they occur may also help them manage the wait better and not feel forgotten. Bringing along a friend, a good book, a hobby, a personal music system, or a laptop or computer game may help patients during this period. Patients also need to know before the day that there is secure storage for their valuable belongings. In the absence of the above, pleasing surroundings in day surgery offering diversion opportunities such as TV/videos with earphones, and a variety of reading material may help ease patient stress over long waiting periods.

Issues relating to a lack of privacy were also significant in this study. It has been shown that even though patients are only in hospital for one day, they consider the experience far from minor (Salvage 1998) and require the same attention, respect and privacy any major operation or hospital stay engenders. For example, patients need not change into a gown until immediately prior to surgery when the previous case has been completed, and should they choose to walk to theatre, a dressing gown is essential. Additionally, confidential discussions between patient and doctor are a basic right and are to be respected in all health-care contexts, including day surgery.

The issue of postoperative pain is a common problem, as reported in the literature review, and requires urgent attention. Strategies to meet this area of concern include: regular staff development sessions in pain management informed by evidence based practice; implementation of a pain management group to ensure patients receive adequate analgesia and education; development of a pain algorithm for nurses to use in pain assessment; and, development of a pain management protocol for patients after discharge. Given regional or local anaesthetic techniques are becoming more popular, it is imperative patients receiving this type of anaesthetic are given adequate pain relief for when the anaesthetic agent wears off. Multimodal analgesia, pre-emptive analgesia (Goodwin 1998), and analgesia specific to an operation (Marquardt and Razis 1996) are also helpful in managing postoperative pain. Essentially, day surgery nurses must have current knowledge of analgesic practices to meet optimal standards of patient care.

Discharge planning is an essential component of the day surgery nurse’s role (Dougherty 1996). As verbal advice is not always remembered after surgery, information for each type of surgery, including relevant phone numbers and follow-up appointments, was developed during this study to meet the post discharge needs of patients. The development and routine utilisation of a simple check list (Noon and Davero 1987) or possible day surgery ‘pathway’ (Baker et al 1999) ensuring all details have been attended, such as communication covering surgery, pain management and discharge planning, may be worth pursuing in order to ensure a holistic approach to patient care. Additionally, ‘hospital in the home’ support may be necessary for following up on patients who are experiencing difficulties in their homes. Indeed, it may have been that some of the patients in this study would have liked to stay in hospital overnight. In a study on patient satisfaction with day surgery, Law (1997) found that some patients would have liked additional time to recover in hospital prior to going home.

Paramount to effective nursing practice is patient comfort and care informed by individual assessment (Coll et al 1999). Two nurses were commended on their caring approach by a number of respondents in this study, which offers evidence of standards of excellence. However, patients indicated they had experienced poor communication. In particular, medical staff need to be aware of patients’ specific concerns regarding communication and be prepared to alter their practices accordingly.

**CONCLUSION**

With the continual improvement and utilisation of the pre-admission clinic of hospitals, together with changes in surgical techniques and support services such as those offered by the ‘hospital in the home’, programs the numbers of patients being treated on a day-stay basis will continue to increase. This justifies the need to regularly monitor and improve the services available to these patients for the short period of time they are in hospital. In order for nurses and the health care team to meet advances affecting health care delivery and patient satisfaction, the continual review of documentation and processes together with the development of and improvement in patient satisfaction tools is paramount.

Data obtained from this survey indicate overall patient satisfaction pre and post relocation of the unit. It is anticipated the Hospital A nursing staff will aim for increased throughput and expansion of the day surgery
service together with improvement in the problem areas highlighted in the survey. Waiting times, communication and pain management were particularly problematic and require urgent attention. Improvements in these areas have already been implemented based on the findings of this study.

Nevertheless, it was disappointing to see previously reported areas of patient discontent such as long waiting times continue to be a problem, suggesting there have been insufficient resources to provide patient satisfaction. This study also suggests that nurses continue to poorly manage pain. The development of clear guidelines for novice staff and on going staff development would inform better pain management practices. Additionally, a multidisciplinary approach to develop specific strategies addressing pain management would also be of benefit, as would the development of a specific day surgery pain management team. Further research would help to clarify why problem areas previously identified in the research have not been addressed.

Readers should be mindful the responses presented in this study represented less than half of those invited to participate at Hospital A. However, this survey provided some insight regarding the services provided to patients in a day surgery centre. This research also highlighted that beneath statistics lies more detailed information that can be used to inform and improve nursing care and patient satisfaction.

REFERENCES


